

Historic Parkway Design

A Look at the AASHTO Green Book

Summary of Position Paper

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This country has a rich history of parkway development. Beginning in the early decades of this century, a concerted effort to promote, design, and develop safe, attractive, and pleasurable drives led to the development of numerous parkways. Such motor ways threading through a landscape were designed to offer the urban dweller visual repose, recreation, and interaction with the natural environment. **This relationship between the park and its many uses, and the roadway with its automobile function, is what distinguishes a parkway from other types of roadways.** The pleasure of the driving experience is paramount.

With the passage of the Intermodal Surface Transportation Efficiency Act (ISTEA), and a new view on transportation systems in this nation, there currently exists a climate of expectation and opportunity. The

greater flexibility available to local and state governments in the distribution and use of federal funding has generated new approaches for addressing transportation issues. Many communities are now responding by implementing creative transportation solutions and enhancements that would have been difficult only a few years ago. In order to respond to this demand and still maintain the safe movement of people and goods, it will be necessary for highway design standards to recognize and respond to these new attitudes and opportunities.

National Significance

The existing and potential losses to the structure and character of historic parkways represent not only the loss of detail or historic character to a particular roadway, but a significant loss of an important national resource. Historic parkways are the legacy of the history of highway development in this nation. They represent a period in which significant advances were made in highway engineering. They demonstrate the successful interaction of diverse professional groups working together to integrate the automobile with the landscape. The engineers, landscape architects, planners, architects, and conservation professionals who developed, designed, and built parkways were developing corridors for transportation, recreation, environmental management, and community enhancement. These multi-use transportation corridors in many ways embody the established goals of ISTEA.

Recreational driving is now the number two form of recreation in the United States.¹ Closely related is the fact that tourism is now the third largest industry and the second largest employer in the nation.² With this in

The National Trust for Historic Preservation's position paper, "Design Considerations for Historic Parkway: A Look at the AASHTO Green Book," was developed as a response to a growing concern for the preservation of the integrity of our nation's historic parkways. The study's premise is that the nation's historic parkways have a purpose and design history distinctive from all other roadways, and that the historic nature of design and alignment developed expressly for pleasure and aesthetics clearly demonstrate the uniqueness of these roadways.

It has been difficult as time, growth, and technologies have changed, for historic parkways to meet the expectations of modern roadways designed to different standards with different intended uses. Not designed to carry high volumes of traffic at higher speeds, historic parkways are nonetheless being pressed into intensive service to help meet the critical traffic needs generated by rapid metropolitan growth. Frequently in efforts to adapt historic parkways to modern uses, historic details and character have been destroyed.

For many parkways, efforts to manage the road according to the engineering and safety standards as codified in *A Policy on Geometric Design of Highways and Streets* by the American Association of State Highway and Transportation Officials (AASHTO), the Green Book, have resulted in the destruction of historic structures, alignments, and landscapes.

At conflict is the desire to provide a safe driving environment while recognizing the historic resources. Currently, however, the Green Book provides no guidance

for accommodating historic resources within highway design. In order to initiate a dialogue regarding possible options for preservation, the National Trust for Historic Preservation, at the request of the Westchester County, New York, Department of Planning and with the financial assistance of the James A. MacDonald Foundation, prepared a position paper examining possible options for the recognition of historic parkways and their safe and sensitive management (see CRM, Vol. 16, No. 10, "Viewpoint," pp. 25-26).

The overriding premise of the paper is that the provision of a safe driving environment and the protection of significant historic resources need not be mutually exclusive. To demonstrate this, the paper identified a number of existing policies and standards that, when appropriately applied, could accommodate both safety and preservation goals. Recognizing, however, that the integrity of significant historic resources cannot rely solely on the thoughtful interpretation of existing codes, the paper further suggests the development of a new functional classification for historic parkways. Functional classification, the system by which AASHTO identifies roadway types (urban street, rural collector, freeway, etc.), carries with it a set of standards (design controls and criteria, elements of design, and cross section elements) for the safe development and management of roadways within each category. The paper was presented to the AASHTO Task Force on Geometric Design by a representative of the Surface Transportation Policy Project on November 9, 1993. A summary of this paper appears above.



Frequently, efforts to enhance safety along the Bronx River Parkway have ignored historic resources and arguably altered the expectancy of the route. Photo courtesy Westchester County Dept. of Planning.

mind, many state departments of transportation, economists, and politicians are viewing the provision and maintenance of safe and attractive motoring routes of importance to the development of a stable economy. The special contribution of historic parkways is in their preservation, through alignment, details, landscape, and corridor activities, of a period of significant engineering and transportation development.

History

The Bronx River Parkway in New York is the first modern parkway, and many would argue the first modern highway in the world. Designed and constructed between 1907 and 1923, the Bronx River Parkway was designed to provide leisure driving and recreational opportunities along the Bronx River corridor. To maintain the aesthetic experience and the provision of a safe driving environment, the parkway was the first to introduce the concept of limited access. Further safety precautions, designed to allow the driver to enjoy the scenery within a well-regulated corridor, included separated grade interchanges in many locations, lighting, an unheard of 40' width of pavement, and in locations the first use of separated travelways by a median. The immense popularity and success of the Bronx River Parkway led to a program of parkway development throughout Westchester County.

The Saw Mill River, Hutchinson River, and Cross County Parkways followed within a few decades in Westchester County. Connecticut saw the development of the Merritt Parkway; Virginia, the Mount Vernon Parkway. New York built the Taconic State Parkway. New Jersey built the Palisades Interstate Parkway and the Garden State Parkway. Denver developed a series of parkways, and California carefully detailed and aligned the Arroyo Seco Parkway (Pasadena Freeway). Tennessee, Texas, and Ohio also developed parkways. The National Park Service designed and built a series of national parkways and developed a comprehensive plan for parkway arrival to Washington, DC.

This quantity and geographic diversity demonstrate the popularity of historic parkways and the intensity with which the nation embraced the new engineering technology within a landscape setting. It is from these unique and

early modern parkways that the origins of the Interstate system and many of our concepts for traffic movement and safety arose.

Current Threats to Historic Parkway

Many historic parkways are at a critical juncture in history. Intensified or changed uses from those originally intended have jeopardized the performance and function of these historic resources. In many cases incremental design changes and modifications over recent decades have seriously threatened the integrity of the original design. In some instances, such as the Bronx River Parkway (originally designed and constructed, 1907-1923) south of its intersection with the Sprain Brook Parkway, the entire historic alignment has been replaced. The severity of this alteration removed one third of the entire length of the parkway from eligibility for listing in the National Register of Historic Places.

Currently, the greatest threats to these parkways are the alteration, replacement or removal of historic structures, the realignment of historic roadway geometry, and the degradation of the historic landscape. The impetus for these changes often originates from liability concerns or changes in the intended use of the roadway. As historic parkways are pressed into uses for which they were not designed, the conflict between use and liability and the historic resources is heightened in the provision of a safe driving environment.

Liability and Change of Intended Use

Both issues of liability and change of intended use demonstrate the need for a new functional classification for historic parkways. With the absence of a classification for historic parkways, many jurisdictions find the courts



From its inception, the Bronx River Parkway was a multi-use corridor. Originating as a clean-up effort for the fouled Bronx River, the Parkway Reservation was dedicated to providing an aesthetic and recreational component in conjunction with an environmentally-sound automobile route. C.1925 photo courtesy Westchester County Archives.

holding historic parkways liable to standards developed for other road types. One must ask the question whether it is reasonable to hold a parkway—with a lower design speed and a historic design purpose of providing an aesthetic and leisurely motoring experience—to the standards governing our interstate system.

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The change in use from the original design intent is a complex issue for many historic parkways throughout the country. Parkway designed in the first decades of this century for leisure and recreation frequently are now functioning as commuter routes as metropolitan growth has surrounded their reservations. Many of these historic parkways now function over capacity at peak hours. Further, in most areas, the acquisition of new corridors to relieve the burden from the historic parkways is financially, politically, or physically impossible. While we cannot deny this reality, we must ask the question at what point and to what standards should these historic parkways be held accountable for change in use.



Construction of the Arroyo Seco Parkway, 1939. Like the Bronx River Parkway, the Arroyo Seco Parkway (Pasadena Freeway) paralleled the river course and provided open space for liesure, recreation, and aesthetic enjoyment. Photo courtesy Caltrans.

As mentioned, use changes and liability issues are negatively affecting historic parkways in three areas: the alteration, replacement, and removal of historic structures, the realignment of historic geometry, and the degradation of the historic landscape.

Alteration, Replacement and Removal of Historic Structures

Historic structures such as bridges, retaining and safety walls, service buildings, sign mounts, and lighting were all originally designed as an integrated system compatible with both the roadway and the landscape.

Many of these structures are now threatened. Held accountable to standards for roads with significantly different intended uses, many structures are being destroyed, or modified in ways significantly altering historic detailing, materials, and proportion. Structures deliberately detailed and thoughtfully located to enhance the travel experience along historic parkways are now being replaced with elements of inappropriate scale, finish, and design. This loss of detail and elegance diminishes the parkway experience, sends conflicting messages to the driver, and alters the informal information system. Is it a parkway or a modern expressway? What are the safety implications of such messages?

Realignment of Historic Geometry

The geometry of historic parkways is perhaps one of their most universally recognizable characteristics. The sensitive placement of the roadway within the natural system minimizes the visual impact of the pavement, accentuates the landscape, and becomes a primary component in the development of the expectancy of the route.

New and frequently incompatible uses now threaten this most distinctive attribute. Many roadways are being straightened and leveled—in response to higher speeds than originally planned—in new alignments entirely unrelated to the landscape. With this realignment, historic structures are frequently left unrelated and unconnected to the alignment they once articulated. The essential quali-



Reclassified as a historic parkway on January 1, 1994, within the California State Scenic Highway System, the Arroyo Seco Parkway will address issues of historic design, expectancy, and informal information systems in the provision of a safe driving environment. Photo courtesy Caltrans.

ty of the parkway experience is lost when insensitive alignments deny the landscape experience—the very essential and distinctive quality that separates parkways from other roadways.

Degradation of the Landscape

The union of roadway and the adjacent landscape is the essence of a historic parkway. Historic parkways were developed within generous rights-of-way or reservations. Usually providing a continuous park corridor for recreation and environmental management, such corridors also enabled the designers the room to sensitively align the roadway within the natural topography, and to maintain or develop buffers to prevent off-site distractions from interfering with the safety and aesthetics of the parkway experience. Within this system, native plant materials, rock features and waterways could be carefully preserved and accentuated. In derelict areas, landscape architects developed new landscapes to replicate the natural landscape of the region.

Many of these historic landscapes have been neglected. Perhaps of greater concern is the fact that the importance of the design relationship between the roadway and the landscape is often misunderstood and thereby mismanaged. The unity of pavement and landscape—viewed as

separate and unrelated today—provides the structure of a parkway. Without this structure, safety, expectancy, and informal information systems cannot be expected to perform effectively.

Inconsistency in the Application of Existing Standards

While many of the threats to the integrity of historic parkways come from changes in use or are generated by safety responses to liability concerns, it can be argued that many of the destructive actions occurring on and along our historic parkways have come from the inconsistent or irregular application of the current standards. As parkways are designed as a comprehensive corridor providing an aesthetic and natural experience, and generally include additional recreational and environmental components, they must be viewed differently from all other roadways. This design distinction and multi-use nature of the parkway corridor represent a unique combination of attributes not found within any of the existing functional classifications defined by AASHTO.

Significant historic landscapes, designers, and structures have enabled many historic parkways to achieve listing in the National Register.³ Combined, historic parkways' distinct attributes, faced by new demands, require a complex management process. How can the agencies responsible for managing historic parkways balance the needs of historic resources, safety considerations, increased use, immediately adjacent recreational and environmental components, and the maintenance of an aesthetic and leisurely driving experience?

Currently most management agencies cannot achieve this balance.

Frequently, and understandably, lacking the resources to sensitively manage historic parkways, most local and state highway departments apply the current standards and expectations to roads designed earlier this century. Due to the lack of a functional classification, and the heightened awareness for safety and liability issues in recent years, management agencies often apply the toughest standards to avoid the possibility of a citation of contributory negligence in the event of an accident. Further, due to the lack of a historic parkway functional classification, courts have held the historic parkways to the highest standards. As a result, sections of historic parkways that may have the characteristics defining the functional classification of a rural collector, are, in instances, being held accountable to freeway design standards.

With the provision of a safe driving environment, the ultimate goal of all concerned with this unique historic system, it seems reckless to continue depending on independent review and interpretation of the current handbook. Only with a clearly defined classification and appropriate design controls and criteria, elements of design, and cross section elements can a uniform threshold of safety be maintained on the country's historic parkways. Only with a clear and reasonable expectation of the uses of these roadways can the aesthetic concerns for the historic resources be effectively studied and managed.

Review of Selected Current Standards Applicable to Historic Parkway

With regard to historic parkways, certain of the existing standards in the Green Book may be applicable to the pro-

posed functional classification of historic parkway. In other instances, existing design controls and criteria, elements of design, and cross section elements may need modification to better accommodate the historic and safety concerns of such parkways. And lastly, there will likely be instances in which the development of new standards will be the most expeditious and prudent method of meeting established goals.

The paper provided a selective review of current classifications and standards in the Green Book relevant to historic parkways. **It was not the intention of this inventory to recommend specific changes, policies, or procedures, but rather to indicate the existence of standards, as existing or with minor modification, that are sympathetic to the needs of historic parkways.** Additionally, comments were made regarding the instances in which the inclusion of new standards may be desired.

Functional Classification for Historic Parkway

Fundamental changes in attitude and funding strategies created by ISTEA come at a critical time for our nation's historic parkways. These roadways, state of the art in design technology and safety considerations when developed, now require a review of their design and their provision of a safe driving environment with regard to currently accepted standards. Concurrent with this basic concern for the effective and safe movement of motor vehicles is the increasing recognition of the history of the design of these parkways, their sensitive alignment within a natural or designed landscape, and the historic bridges, walls, and other structures that were not only designed for function, but also beauty.

It was the position of the paper that concerns for appropriate safety standards and historic resources need not be mutually exclusive. Many of the problems faced by local and state governments with regard to design standards for historic parkways come not from historic design flaws, but rather from the confusion over how to classify the roadway. To what standards should a historic parkway be held? Further, should it be demonstrated that an area of a historic parkway needs review or redesign, the current standards often do not offer the flexibility or creative options to successfully improve safety and maintain the historic character and experience of the roadway.

The paper requested the AASHTO Task Force on Geometric Design to review the issues of safety and historic significance and consider, among other possible solutions, the development of a new functional classification for historic parkways. Such a classification would adopt new or revised design controls and criteria, elements of design, and cross section elements focused on the unique use, resources, and characteristics of historic parkways.

Without the development of such a classification and standards, it is likely historic parkways will continue to be regulated by broad and often conflicting interpretations of the current standards. This lack of consistency confuses the driver's expectation on such roadways and leaves the safety of significant national resources without the protection of uniform standards.

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Functional Classification Defined

The potential for a functional classification for historic parkways raises the legal question of a definition for such roadways. Unlike the other classifications within AASHTO, historic parkways represent a unique combination of physical design, historic resource, and ancillary activity issues. The design controls and criteria, elements of design, and cross section elements with the potential for alternate mitigating factors, the inclusion of historic structures, and integration within a multi use park corridor, should be applicable only to roads of documented national historic significance. In order to prevent the misuse or adoption of these standards by other types of roadways for whatever perceived benefit, a historic parkway definition would be required.

In order to achieve the needed protection a definition would provide, without unduly complicating the AASHTO or state adoption process or requiring additional administrative commitment, it is suggested that parkways listed in or eligible for listing in the National Register of Historic Places be the criteria for use of the proposed functional classification for historic parkways. As an established process, recognized for its integrity in documentation and review, the National Register listing would certify the parkway in question was truly of national significance and therefore deserving of standards tailored to providing safety within a historic transportation corridor.

Research Opportunities for Historic Parkway

In order to provide historic parkways with the resources to creatively provide a safe driving environment, continued research into other methods for providing these means is recommended. Research through AASHTO, state departments of transportation, the Federal Highway Administration, universities, and other organizations could expand the base of acceptable design responses for safety and preservation issues. Further, such research may provide valuable new insights to alternative highway design and development. With ISTEA, AASHTO has the opportunity to demonstrate continued leadership in the development of highway standards with research into safe aesthetic design and preservation.

Related Issues Influencing Historic Parkway

While the Green Book is the primary source of highway standards for most transportation departments and management agencies, and while it is routinely used as a legal reference for safety issues, it must be remembered that there are other factors influencing the development of roadways. Other codes and standards, as well as local policies and practices, when properly addressed and understood, may provide opportunities for enhancement and preservation of historic parkways.

In addition to a review of the *Manual on Uniform Traffic Control Devices*, accuracy in traffic reporting, and educa-



Like other historic parkways, the provision of safe driving features along the Merritt Parkway has frequently been in conflict with the characteristics of the historic parkway. Photo by Robert C. Moore, Connecticut Dept. of Transportation.

tion of the public and professionals, a National Clearinghouse for Transportation Resources is recommended.

The greater flexibility provided by ISTEA for transportation projects has encouraged some transportation officials to develop and test alternate traffic and transportation management devices. To avoid duplication of related efforts and share innovative solutions, it would be beneficial to have AASHTO approved alternates available through some national source or clearinghouse.

Summary

The provision of a safe driving environment and the preservation of significant national historic resources need not be mutually exclusive. The development of a functional classification for historic parkways within A Policy on Geometric Design of Highways and Streets can provide the basis to structure a nationally recognized and uniformly applied standard regarding the unique resources of historic parkways. With this classification can arise the expertise and resources of design and preservation professionals committed to assisting AASHTO in the development of standards suited to the safe management of historic parkways.

Notes

¹ U.S. Department of Transportation, Federal Highway Administration, *National Scenic Byways Study*, January 1991, Publication No. PD-91-010, p. 40.

² Source: US Travel Data Center, Washington, DC

³ Parkway currently listed in the National Register of Historic Places (a partial listing):

- Forest Street Parkway and Downing Street Parkway, Denver
- Merritt Parkway, Connecticut
- Kentmere Parkway, Delaware
- Baltimore-Washington Parkway, Maryland
- Zumbro Parkway Bridge, Minnesota
- Eastern and Ocean Parkways, Long Island, New York
- Bronx River Parkway, New York
- Soldiers Memorial Parkway, Ohio
- Patten Parkway and Memphis Parkway System, Tennessee
- Mission Parkway, Texas

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